

WHAT IS CLAIMED IS:

1           1.     A wireless network system, comprising:  
2                 a server system connected to a network;  
3                 an electronic device having a wireless transceiver adapted to communicate via at  
4           least one of light transmission and radio frequency (RF) transmission; and  
5                 a portable wireless device having a wireless connection to the network, wherein  
6           the portable wireless device is adapted to communicate wirelessly with the electronic  
7           device, and the electronic device communicates with the server system over the network  
8           through the portable wireless device.

1           2.     The wireless network system according to claim 1, wherein communication  
2           between the electronic device and the server system is secured from the portable wireless device.

1           3.     The wireless network system according to claim 1, wherein the wireless  
2           connection is selected from the group consisting of a Transmission Control Protocol/Internet  
3           Protocol (TCP/IP) connection, a satellite connection, a Global System for Mobile  
4           communications (GSM) connection, a code-division multiple access (CDMA) connection, a  
5           time-division multiple access (TDMA) connection, a Cellular Digital Packet Data (CDPD)  
6           connection, a General Packet Radio Service (GPRS) connection, and a wideband code-division  
7           multiple access (WCDMA) connection.

1           4.     The wireless network system according to claim 1, wherein the electronic device  
2           communicates with the server system over the network through the portable wireless device by

3 transmitting data destined for the server system wirelessly to the portable wireless device, and  
4 the portable wireless device transmits the data destined for the server system over the network  
5 via the wireless connection to the server system.

1 5. The wireless network system according to claim 1, wherein the electronic device  
2 communicates with the server system over the network through the portable wireless device by  
3 receiving data destined for the electronic device transmitted from the server system over the  
4 network to the portable wireless device via the wireless connection, and the portable wireless  
5 device transmits the data destined for the electronic device wirelessly to the electronic device.

1 6. The wireless network system according to claim 1, wherein the electronic device  
2 lacks a permanent connection to the network.

1 7. The wireless network system according to claim 1, wherein the electronic device  
2 only communicates with the server system indirectly through the portable wireless device.

1 8. The wireless network system according to claim 1, wherein the server system is  
2 adapted to process a transaction.

1 9. The wireless network system according to claim 1, wherein the portable wireless  
2 device includes a second wireless transceiver to communicate wirelessly with the wireless  
3 transceiver of the electronic device.

1           10.    The wireless network system according to claim 1, wherein the network is a wide  
2 area network (WAN).

1           11.    The wireless network system according to claim 1, wherein communication  
2 between the electronic device and the server system is packet-based.

1           12.    A method of wireless communication, comprising:  
2                   connecting a server system to a network;  
3                   establishing a wireless connection to the network by a portable wireless device;  
4                   and  
5                   communicating wirelessly by an electronic device to the server system over the  
6 network through the portable wireless device, wherein the electronic device  
7 communicates directly with the portable wireless device via at least one of light  
8 transmission and radio frequency (RF) transmission.

1           13.    The method according to claim 12, wherein the wireless connection is selected  
2 from the group consisting of a Transmission Control Protocol/Internet Protocol (TCP/IP)  
3 connection, a satellite connection, a Global System for Mobile communications (GSM)  
4 connection, a code-division multiple access (CDMA) connection, a time-division multiple access  
5 (TDMA) connection, a Cellular Digital Packet Data (CDPD) connection, a General Packet Radio  
6 Service (GPRS) connection, and a wideband code-division multiple access (WCDMA)  
7 connection.

1           14.    The method according to claim 12, wherein communication between the  
2 electronic device and the server system is secured from the portable wireless device.

1           15.    The method according to claim 12, further including processing a transaction by  
2 the server system.

1           16.    The method according to claim 12, further including:  
2                   transmitting data destined for the server system wirelessly by the electronic  
3 device to the portable wireless device; and  
4                   transmitting the data destined for the server system over the network by the  
5 portable wireless device via the wireless connection to the server system.

1           17.    The method according to claim 12, further including:  
2                   transmitting data destined for the electronic device from the server system over  
3 the network to the portable wireless device via the wireless connection; and  
4                   transmitting the data destined for the electronic device wirelessly from the  
5 portable wireless device to the electronic device.

1           18.    The method according to claim 12, wherein the electronic device lacks a  
2 permanent connection to the network.

1           19.    The method according to claim 12, wherein the electronic device only  
2 communicates with the server system indirectly through the portable wireless device.

1           20.    The method according to claim 12, wherein the network is a wide area network  
2 (WAN).

1           21.    The method according to claim 12, wherein communication between the  
2 electronic device and the server system is packet-based.

1           22.    A portable wireless device, comprising:  
2                   a first wireless transceiver to communicate wirelessly with an electronic device,  
3 wherein the first wireless transceiver is adapted to communicate via at least one of light  
4 transmission and radio frequency (RF) transmission; and  
5                   a second wireless transceiver having a wireless connection to a network, wherein  
6 a server system is connected to the network, and the portable wireless device is adapted  
7 to permit the electronic device to communicate with the server system over the network  
8 through the portable wireless device.

1           23.    The portable wireless device according to claim 22, wherein the first wireless  
2 transceiver communicates wirelessly with the electronic device via a protocol selected from the  
3 group consisting of InfraRed communication, Bluetooth protocol, and IEEE 802.11 protocol.

1           24.    The portable wireless device according to claim 22, wherein the wireless  
2 connection is selected from the group consisting of a Transmission Control Protocol/Internet  
3 Protocol (TCP/IP) connection, a satellite connection, a Global System for Mobile  
4 communications (GSM) connection, a code-division multiple access (CDMA) connection, a

5 time-division multiple access (TDMA) connection, a Cellular Digital Packet Data (CDPD)  
6 connection, a General Packet Radio Service (GPRS) connection, and a wideband code-division  
7 multiple access (WCDMA) connection.

1 25. The portable wireless device according to claim 22, wherein the first wireless  
2 transceiver and the second wireless transceiver are a same device.

1 26. The portable wireless device according to claim 22, wherein the server system is  
2 adapted to process a transaction.

1 27. The portable wireless device according to claim 22, wherein the electronic device  
2 communicates with the server system over the network through the portable wireless device by  
3 transmitting data destined for the server system wirelessly to the portable wireless device, and  
4 the portable wireless device transmits the data destined for the server system over the network  
5 via the wireless connection to the server system.

1 28. The portable wireless device according to claim 22, wherein the electronic device  
2 communicates with the server system over the network through the portable wireless device by  
3 receiving data destined for the electronic device transmitted from the server system over the  
4 network to the portable wireless device via the wireless connection, and the portable wireless  
5 device transmits the data destined for the electronic device wirelessly to the electronic device.

29. The portable wireless device according to claim 22, wherein the electronic device lacks a permanent connection to the network.

30. The portable wireless device according to claim 22, wherein the electronic device only communicates with the server system indirectly through the portable wireless device.

31. The portable wireless device according to claim 22, wherein the network is a wide area network (WAN).

32. The portable wireless device according to claim 22, wherein the portable wireless device is a mobile telephone.

33. The portable wireless device according to claim 22, wherein the portable wireless device is a laptop computer.

34. The portable wireless device according to claim 22, wherein the portable wireless device is a personal digital assistant (PDA).

35. The portable wireless device according to claim 22, wherein the portable device is selected from the group consisting of an embedded computing device in a vehicle, and an embedded computing device within a wearable computer.

1           36.    The portable wireless device according to claim 22, wherein communication  
2   between the electronic device and the server system is packet-based.

1           37.    A method of wireless communication by a portable wireless device, comprising:  
2                   establishing wireless communication with an electronic device via at least one of  
3   light transmission and radio frequency (RF) transmission;  
4                   establishing a wireless connection to a network, wherein a server system is  
5   connected to the network;  
6                   receiving data destined for the server system wirelessly from the electronic  
7   device;  
8                   transmitting the data destined for the server system over the network via the  
9   wireless connection to the server system;  
10                  receiving data destined for the electronic device from the server system over the  
11   network via the wireless connection; and  
12                  transmitting the data destined for the electronic device wirelessly to the electronic  
13   device.

1           38.    The method according to claim 37, wherein communication between the  
2   electronic device and the server system is secured from the portable wireless device.

1           39.    The method according to claim 37, wherein the wireless connection is selected  
2   from the group consisting of a Transmission Control Protocol/Internet Protocol (TCP/IP)  
3   connection, a satellite connection, a Global System for Mobile communications (GSM)



4 connection, a code-division multiple access (CDMA) connection, a time-division multiple access  
5 (TDMA) connection, a Cellular Digital Packet Data (CDPD) connection, a General Packet Radio  
6 Service (GPRS) connection, and a wideband code-division multiple access (WCDMA)  
7 connection.

1 40. The method according to claim 37, wherein the server system is adapted to  
2 process a transaction.

1 41. The method according to claim 37, wherein the electronic device only  
2 communicates with the server system indirectly through the portable wireless device.

1 42. The method according to claim 37, wherein the network is a wide area network  
2 (WAN).

1 43. The method according to claim 37, wherein communication between the  
2 electronic device and the server system is packet-based.

1 44. A program code storage device, comprising:  
2 a machine-readable storage medium; and  
3 machine-readable program code, stored on the machine readable storage medium,  
4 having instructions to  
5 establish wireless communication with an electronic device via at least one  
6 of light transmission and radio frequency (RF) transmission,

7 establish a wireless connection to a network, wherein a server system is  
8 connected to the network,  
9 receive data destined for the server system wirelessly from the electronic  
10 device,  
11 transmit the data destined for the server system over the network via the  
12 wireless connection to the server system,  
13 receive data destined for the electronic device from the server system over  
14 the network via the wireless connection, and  
15 transmit the data destined for the electronic device wirelessly to the  
16 electronic device.

1 45. The program code storage device according to claim 44, wherein communication  
2 between the electronic device and the server system is secured from the portable wireless device.

1 46. The program code storage device according to claim 44, wherein the wireless  
2 connection is selected from the group consisting of a Transmission Control Protocol/Internet  
3 Protocol (TCP/IP) connection, a satellite connection, a Global System for Mobile  
4 communications (GSM) connection, a code-division multiple access (CDMA) connection, a  
5 time-division multiple access (TDMA) connection, a Cellular Digital Packet Data (CDPD)  
6 connection, a General Packet Radio Service (GPRS) connection, and a wideband code-division  
7 multiple access (WCDMA) connection.

1           47.    The program code storage device according to claim 44, wherein the server  
2 system is adapted to process a transaction.

1           48.    The program code storage device according to claim 44, wherein the electronic  
2 device only communicates with the server system indirectly through the portable wireless device.

1           49.    The program code storage device according to claim 44, wherein the network is a  
2 wide area network (WAN).

1           50.    The program code storage device according to claim 44, wherein communication  
2 between the electronic device and the server system is packet-based.

1           51.    An electronic device to indirectly communicate wirelessly with a server system,  
2 comprising:

3                   a wireless transceiver to communicate wirelessly via at least one of light  
4 transmission and radio frequency (RF) transmission with a portable wireless device  
5 having a wireless connection to a network, wherein the server system is connected  
6 to the network, and the electronic device communicates with the server system over the  
7 network through the portable wireless device.

1           52.    The electronic device according to claim 51, wherein the wireless transceiver  
2 communicates wirelessly with the portable wireless device via a protocol selected from the group  
3 consisting of InfraRed communication, Bluetooth protocol, and IEEE 802.11 protocol.

1           53.    The electronic device according to claim 51, wherein the wireless connection is  
2   selected from the group consisting of a Transmission Control Protocol/Internet Protocol  
3   (TCP/IP) connection, a satellite connection, a Global System for Mobile communications (GSM)  
4   connection, a code-division multiple access (CDMA) connection, a time-division multiple access  
5   (TDMA) connection, and a Cellular Digital Packet Data (CDPD) connection, a General Packet  
6   Radio Service (GPRS) connection, and a wideband code-division multiple access (WCDMA)  
7   connection.

1           54.    The electronic device according to claim 51, wherein communication between the  
2   electronic device and the server system is secured from the portable wireless device.

1           55.    The electronic device according to claim 51, wherein the electronic device  
2   communicates with the server system over the network through the portable wireless device by  
3   transmitting data destined for the server system wirelessly to the portable wireless device, and  
4   the portable wireless device transmits the data destined for the server system over the network  
5   via the wireless connection to the server system.

1           56.    The electronic device according to claim 51, wherein the electronic device  
2   communicates with the server system over the network through the portable wireless device by  
3   receiving data destined for the electronic device transmitted from the server system over the  
4   network to the portable wireless device via the wireless connection, and the portable wireless  
5   device transmits the data destined for the electronic device wirelessly to the electronic device.

1           57.    The electronic device according to claim 51, wherein electronic device lacks a  
2 permanent connection to the network.

1           58.    The electronic device according to claim 51, wherein the electronic device only  
2 communicates with the server system indirectly through the portable wireless device.

1           59.    The electronic device according to claim 51, wherein the server system is adapted  
2 to process a transaction.

1           60.    The electronic device according to claim 51, wherein the network is a wide area  
2 network (WAN).

1           61.    The electronic device according to claim 51, wherein the electronic device is  
2 embedded into a vending machine.

1           62.    The electronic device according to claim 51, wherein communication between the  
2 electronic device and the server system is packet-based.

1           63.    A method of wireless communication by an electronic device, comprising:  
2                establishing wireless communication with a portable wireless device via at  
3                least one of light transmission and radio frequency (RF) transmission, wherein the  
4                portable wireless device has a wireless connection to a network, and a server system  
5                is connected to the network;

6 transmitting data destined for the server system wirelessly to the portable  
7 electronic device, wherein the portable wireless device transmits the data destined for  
8 the server system over the network via the wireless connection to the server system; and  
9 receiving data destined for the electronic device from the server system, wherein  
10 the portable wireless device receives the data destined for the electronic device from the  
11 server system over the network via the wireless connection and transmits the data  
12 destined for the electronic device wirelessly to the electronic device.

1 64. The method according to claim 63, wherein communication between the  
2 electronic device and the server system is secured from the portable wireless device.

1 65. The method according to claim 63, wherein the wireless connection is selected  
2 from the group consisting of a Transmission Control Protocol/Internet Protocol (TCP/IP)  
3 connection, a satellite connection, a Global System for Mobile communications (GSM)  
4 connection, a code-division multiple access (CDMA) connection, a time-division multiple access  
5 (TDMA) connection, a Cellular Digital Packet Data (CDPD) connection, a General Packet Radio  
6 Service (GPRS) connection, and a wideband code-division multiple access (WCDMA)  
7 connection.

1 66. The method according to claim 63, wherein the server system is adapted to  
2 process a transaction.

1           67.    The method according to claim 63, wherein the electronic device only  
2 communicates with the server system indirectly through the portable wireless device.

1           68.    The method according to claim 63, wherein the network is a wide area network  
2 (WAN).

1           69.    The method according to claim 63, wherein communication between the  
2 electronic device and the server system is packet-based.

1           70.    A program code storage device, comprising:  
2                   a machine-readable storage medium; and  
3                   machine-readable program code, stored on the machine-readable storage medium,  
4           having instructions to  
5                   establish wireless communication with a portable wireless device via at  
6                   least one of light transmission and radio frequency (RF) transmission, wherein the  
7                   portable wireless device has a wireless connection to a network, and a server  
8                   system is connected to the network,  
9                   transmit data destined for the server system wirelessly to the portable  
10                  electronic device, wherein the portable wireless device transmits the data  
11                  destined for the server system over the network via the wireless connection to the  
12                  server system, and  
13                  receive data destined for the electronic device from the server system,  
14                  wherein the portable wireless device receives the data destined for the electronic

15 device from the server system over the network via the wireless connection and  
16 transmits the data destined for the electronic device wirelessly to the electronic  
17 device.

1 71. The program code storage device according to claim 70, wherein communication  
2 between the electronic device and the server system is secured from the portable wireless device.

1 72. The program code storage device according to claim 70, wherein the wireless  
2 connection is selected from the group consisting of a Transmission Control Protocol/Internet  
3 Protocol (TCP/IP) connection, a satellite connection, a Global System for Mobile  
4 communications (GSM) connection, a code-division multiple access (CDMA) connection, a  
5 time-division multiple access (TDMA) connection, a Cellular Digital Packet Data (CDPD)  
6 connection, a General Packet Radio Service (GPRS) connection, and a wideband code-division  
7 multiple access (WCDMA) connection.

1 73. The program code storage device according to claim 70, wherein the server  
2 system is adapted to process a transaction.

1 74. The program code storage device according to claim 70, wherein the electronic  
2 device only communicates with the server system indirectly through the portable wireless device.

1 75. The program code storage device according to claim 70, wherein the network is a  
2 wide area network (WAN).



1           76.    The program code storage device according to claim 70, wherein communication  
2   between the electronic device and the server system is packet-based.

1           77.    A vending machine, comprising:  
2                   a wireless transceiver to communicate wirelessly via at least one of light  
3   transmission and radio frequency (RF) transmission with a portable wireless device  
4   having a wireless connection to a network, wherein a server system is connected to the  
5   network, and the wireless transceiver communicates with the server system over the  
6   network through the portable wireless device; and  
7                   a dispenser to dispense an item when an approval is received from the server  
8   system over the network through the portable wireless device.

1           78.    The vending machine according to claim 77, wherein the wireless transceiver  
2   communicates wirelessly with the portable wireless device via a protocol selected from the group  
3   consisting of InfraRed communication, Bluetooth protocol, and IEEE 802.11 protocol.

1           79.    The vending machine according to claim 77, wherein the wireless connection is  
2   selected from the group consisting of a Transmission Control Protocol/Internet Protocol  
3   (TCP/IP) connection, a satellite connection, a Global System for Mobile communications (GSM)  
4   connection, a code-division multiple access (CDMA) connection, a time-division multiple access  
5   (TDMA) connection, a Cellular Digital Packet Data (CDPD) connection, a General Packet Radio  
6   Service (GPRS) connection, and a wideband code-division multiple access (WCDMA)  
7   connection.

1           80.    The vending machine according to claim 77, wherein the approval is transmitted  
2   from the server system to the vending machine after successful payment verification.

1           81.    The vending machine according to claim 77, wherein communication between the  
2   vending machine and the server system is secured from the portable wireless device.

1           82.    The vending machine according to claim 77, wherein the vending machine  
2   communicates with the server system over the network through the portable wireless device by  
3   transmitting data destined for the server system wirelessly to the portable wireless device, and  
4   the portable wireless device transmits the data destined for the server system over the network  
5   via the wireless connection to the server system.

1           83.    The vending machine according to claim 77, wherein the vending machine  
2   communicates with the server system over the network through the portable wireless device by  
3   receiving data destined for the vending machine transmitted from the server system over the  
4   network to the portable wireless device via the wireless connection, and the portable wireless  
5   device transmits the data destined for the vending machine wirelessly to the vending machine.

1           84.    The vending machine according to claim 77, wherein the vending machine lacks a  
2   permanent connection to the network.

1           85.    The vending machine according to claim 77, wherein the vending machine only  
2   communicates with the server system indirectly through the portable wireless device.

1           86.     The vending machine according to claim 77, wherein the server system is adapted  
2     to process a transaction.

1           87.     The vending machine according to claim 77, wherein the wireless transceiver  
2     transmits telemetry data destined to the server system along with transaction data destined to the  
3     server system transmitted from the wireless transceiver.

1           88.     The vending machine according to claim 77, wherein the network is a wide area  
2     network (WAN).

1           89.     The vending machine according to claim 77, wherein communication between the  
2     wireless transceiver and the server system is packet-based.

1           90.     A method of wireless communication for payment processing, comprising:  
2                   connecting a payment processing server system to a network;  
3                   establishing a wireless connection to the network by a portable wireless device;  
4                   communicating wirelessly by a terminal to the payment processing server system  
5     over the network through the portable wireless device, wherein the terminal  
6     communicates directly with the portable wireless device via at least one of light  
7     transmission and radio frequency (RF) transmission; and  
8                   processing a transaction by the payment processing server system.

1           91.    The method according to claim 90, further including communicating wirelessly  
2   with the portable wireless device by the terminal.

1           92.    The method according to claim 90, wherein the wireless connection is selected  
2   from the group consisting of a Transmission Control Protocol/Internet Protocol (TCP/IP)  
3   connection, a satellite connection, a Global System for Mobile communications (GSM)  
4   connection, a code-division multiple access (CDMA) connection, a time-division multiple access  
5   (TDMA) connection, a Cellular Digital Packet Data (CDPD) connection, a General Packet Radio  
6   Service (GPRS) connection, and a wideband code-division multiple access (WCDMA)  
7   connection.

1           93.    The method according to claim 90, wherein communication between the terminal  
2   and the payment processing server system is secured from the portable wireless device.

1           94.    The method according to claim 90, further including:  
2                   transmitting data destined for the payment processing server system wirelessly by  
3   the terminal to the portable wireless device; and  
4                   transmitting the data destined for the payment processing server system over the  
5   network by the portable wireless device via the wireless connection to the server system.

1           95.    The method according to claim 90, further including:  
2                   transmitting data destined for the terminal from the payment processing server  
3   system over the network to the portable wireless device via the wireless connection; and

transmitting the data destined for the terminal wirelessly from the portable  
wireless device to the terminal.

96. The method according to claim 90, wherein the terminal lacks a permanent  
connection to the network.

97. The method according to claim 90, wherein the terminal only communicates with  
the payment processing server system indirectly through the portable wireless device.

98. The method according to claim 90, wherein the network is a wide area network  
(WAN).

99. The method according to claim 90, wherein communication between the terminal  
and the payment processing server system is packet-based.

100. A method of reporting status information of a terminal, comprising:  
establishing a wireless connection to a network by a portable wireless device,  
wherein a server system is connected to the network;  
establishing a local wireless connection between the portable wireless device and  
the terminal, wherein the terminal communicates directly with the portable wireless  
device via at least one of light transmission and radio frequency (RF) transmission;  
requesting the status information by the portable wireless device from the  
terminal;

transmitting the status information from the terminal to the portable  
electronic device; and  
transmitting the status information from the portable electronic device over the  
network to the server system via the wireless connection.

101. The method according to claim 100, wherein communication between the  
terminal and the server system is secured from the portable wireless device.

102. The method according to claim 100, wherein the wireless connection is selected  
from the group consisting of a Transmission Control Protocol/Internet Protocol (TCP/IP)  
connection, a satellite connection, a Global System for Mobile communications (GSM)  
connection, a code-division multiple access (CDMA) connection, a time-division multiple access  
(TDMA) connection, a Cellular Digital Packet Data (CDPD) connection, a General Packet Radio  
Service (GPRS) connection, and a wideband code-division multiple access (WCDMA)  
connection.

103. The method according to claim 100, further including:  
transmitting data destined for the terminal from the server system over the  
network to the portable wireless device via the wireless connection; and  
transmitting the data destined for the terminal wirelessly from the portable  
wireless device to the electronic device via the local wireless connection.

104. The method according to claim 100, wherein the terminal lacks a permanent connection to the network.

105. The method according to claim 100, wherein the terminal only communicates with the server system indirectly through the portable wireless device.

106. The method according to claim 100, wherein the network is a wide area network (WAN).

107. The method according to claim 100, wherein communication between the terminal and the server system is packet-based.

108. A method of keyless entry, comprising:

establishing a wireless connection to a network by a portable wireless device, wherein a server system is connected to the network;

establishing a local wireless connection by the portable wireless device with an access terminal, wherein the access terminal communicates directly with the portable wireless device via at least one of light transmission and radio frequency (RF) transmission;

transmitting an access code from the portable wireless device via the local wireless connection to the access terminal;

transmitting an authorization package including the access code from the access terminal via the local wireless connection to the portable wireless device;

transmitting the authorization package from the portable wireless device over the network to the server system via the wireless connection;

processing the authorization package by the server system to provide a result as to whether access is permitted;

transmitting the result from the server system over the network to the portable wireless device via the wireless connection;

transmitting the result from the portable wireless device wirelessly to the access terminal via the local wireless connection; and

granting access by the access terminal if the result indicates that access is permitted.

109. The method according to claim 108, wherein communication between the access terminal and the server system is secured from the portable wireless device.

110. The method according to claim 108, wherein the wireless connection is selected from the group consisting of a Transmission Control Protocol/Internet Protocol (TCP/IP) connection, a satellite connection, a Global System for Mobile communications (GSM) connection, a code-division multiple access (CDMA) connection, a time-division multiple access (TDMA) connection, a Cellular Digital Packet Data (CDPD) connection, a General Packet Radio Service (GPRS) connection, and a wideband code-division multiple access (WCDMA) connection.



1           111.   The method according to claim 108, wherein the access terminal lacks a  
2 permanent connection to the network.

1           112.   The method according to claim 108, wherein the access terminal only  
2 communicates with the server system indirectly through the portable wireless device.

1           113.   The method according to claim 108, wherein the network is a wide area network  
2 (WAN).

1           114.   The method according to claim 108, wherein communication between the access  
2 terminal and the server system is packet-based.

1           115.   A method of wireless communication by a stationary node, comprising:  
2                   collecting data to be transmitted to a server system connected to a network;  
3                   establishing wireless communication with a portable wireless device via at least  
4 one of light transmission and radio frequency (RF) transmission, wherein the portable  
5 wireless device has a wireless connection to the network; and  
6                   transmitting the data wirelessly to the portable wireless device, wherein the  
7 portable wireless device transmits the data to the server system over the network via the  
8 wireless connection to the server system.

1           116.   The method according to claim 115, wherein communication between the  
2 stationary node and the server system is secured from the portable wireless device.

1           117. The method according to claim 115, wherein the wireless connection is selected  
2 from the group consisting of a Transmission Control Protocol/Internet Protocol (TCP/IP)  
3 connection, a satellite connection, a Global System for Mobile communications (GSM)  
4 connection, a code-division multiple access (CDMA) connection, a time-division multiple access  
5 (TDMA) connection, and a Cellular Digital Packet Data (CDPD) connection, a General Packet  
6 Radio Service (GPRS) connection, and a wideband code-division multiple access (WCDMA)  
7 connection.

1           118. The method according to claim 115, wherein the stationary node only  
2 communicates with the server system indirectly through the portable wireless device.

1           119. The method according to claim 115, wherein the network is a wide area network  
2 (WAN).

1           120. The method according to claim 115, wherein communication between the  
2 stationary node and the server system is packet-based.

1           121. A method of non-real-time wireless communication by a stationary node,  
2 comprising:  
3               collecting data to be transmitted to a server system connected to a network;  
4               establishing wireless communication via a personal area network (PAN) with a  
5 portable wireless device via at least one of light transmission and radio frequency (RF)  
6 transmission; and

transmitting the data wirelessly to the portable wireless device via the personal area network (PAN), wherein the portable wireless device transmits the data over the network to the server system at a later time.

122. The method according to claim 121, wherein the network is a second personal area network (PAN) and the portable wireless device transmits the data directly to the server system over the second personal area network.

123. The method according to claim 121, wherein the network is a wide area network (WAN), and the portable wireless device transmits the data to a second portable wireless device having a wireless connection to the wide area network, and the second portable wireless device transmits the data over the wide area network via the wireless connection to the server system.

124. The method according to claim 121, wherein communication between the stationary node and the server system is secured from the portable wireless device.

125. The method according to claim 123, wherein the wireless connection is selected from the group consisting of a Transmission Control Protocol/Internet Protocol (TCP/IP) connection, a satellite connection, a Global System for Mobile communications (GSM) connection, a code-division multiple access (CDMA) connection, a time-division multiple access (TDMA) connection, a Cellular Digital Packet Data (CDPD) connection, a General Packet Radio Service (GPRS) connection, and a wideband code-division multiple access (WCDMA) connection.

126. The method according to claim 121, wherein communication via the personal area network (PAN) is via a protocol selected from the group consisting of InfraRed communication, Bluetooth protocol, and IEEE 802.11 protocol.

127. A method of non-real-time wireless communication to a designated stationary node, comprising:

selecting a portable wireless device that travels within a personal area network (PAN) of the designated stationary node; and

transmitting wirelessly, from a server system connected to a network, data for the designated stationary node over the network to the portable wireless device, wherein the portable wireless device travels within the personal area network (PAN) of the designated stationary node and transmits wirelessly the data to the designated stationary node over the personal area network via at least one of light transmission and radio frequency (RF) transmission.

128. The method according to claim 127, wherein the network is a second personal area network (PAN) and the portable wireless device receives the data directly from the server system over the second personal area network.

129. The method according to claim 127, wherein the network is a wide area network (WAN).

1           130. The method according to claim 127, wherein communication between the  
2 designated stationary node and the server system is secured from the portable wireless device.

1           131. The method according to claim 127, wherein communication over the wide area  
2 network (WAN) is via a connection selected from the group consisting of a Transmission  
3 Control Protocol/Internet Protocol (TCP/IP) connection, a satellite connection, a Global System  
4 for Mobile communications (GSM) connection, a code-division multiple access (CDMA)  
5 connection, a time-division multiple access (TDMA) connection, a Cellular Digital Packet Data  
6 (CDPD) connection, a General Packet Radio Service (GPRS) connection, and a wideband code-  
7 division multiple access (WCDMA) connection.

1           132. The method according to claim 127, wherein communication via the personal area  
2 network (PAN) is via a protocol selected from the group consisting of InfraRed communication,  
3 Bluetooth protocol, and IEEE 802.11 protocol.